REMARKS

The Examiner is thanked for the careful examination of the application. However, in view of the foregoing amendments and the following remarks, the Examiner is respectfully requested to reconsider and withdraw the rejections.

Claims 11, 12, 14, 15, 17 and 18 are rejected under 35 U.S.C. §102(b) as being allegedly anticipated by USP 5,689,590, hereinafter *Shirasawa*.

Claim 11 claims an image processor, claim 14 claims a method of image processing for detecting a specified color, and claim 17 claims a computer program. The image processor includes first and second decision controllers, and a color decision controller. The first decision controller decides whether each input color component gradation value of a target pixel exists in a respective first range for each of the color components, the range being defined by a preset minimum and a preset maximum gradation value for each color component. The second decision controller which performs a linear calculation between each color component gradation value of the target pixel and decides whether results of the calculation exist in a respective second range for each linear calculation that is different from the first ranges. The second range is preset in accordance with the specified color. The color decision controller decides that the target pixel has the specific color when the first decision controller decides that each color component gradation value of the target pixel exists in the first ranges and the second decision controller decides that the results exist in the second ranges.

Through the structure of the claimed invention, deciding whether a particular pixel is a different color or is noise can be efficiently determined by comparing each color component gradation value of the target pixel with the other color component gradation values of the target pixel and deciding whether results of the calculation

exist in a respective second range that is different from the first ranges, as performed by the second decision controller. See the flowchart in Figure 8, paragraphs [0043] to [0047] and Figure 9 of the published application for a description of one preferred embodiment. However, the present invention is not limited to the disclosed preferred embodiments.

In contrast to claim 11, *Shirasawa* does not teach or suggest a first decision controller which decides whether each input color component gradation value of a target pixel exists in a respective first range for each of the color components, the range being defined by a preset minimum and a preset maximum gradation value for each color component, in combination with the other claimed features of claim 11. In *Shirasawa* the calculation is based on the current MIN and MAX values of the pixel in question, not of a preset value. Compare Fig. 18 of *Shirasawa* to paragraph [0030] and S1022 in Fig. 5 of the published present application.

In the response to arguments on page 2 of the Official Action, the Examiner refers to the portion of *Shirasawa* dealing with the sixth embodiment in column 15. In the sixth embodiment white levels are obtained using both the maximum value MAX (r, g, b) and the maximum difference among the density levels concerning r, g and b. Thus, the sixth embodiment does not disclose whether each input color component gradation value of a target pixel exists in a respective first range or each of the color components.

On page 4 of the Official Action at paragraph 2, the Examiner refers to the seventh embodiment of *Shirasawa*. In the seventh embodiment *Shirasawa* discloses that all color components r, g and b are equal to or less than a predetermined threshold value th1. Thus, the seventh embodiment of *Shirasawa* does not disclose

a ranged defined by a preset minimum and a preset maximum gradation value for each color component.

Claims 14 and 17 are similar to claim 11, and claims 12, 15, and 18 depend from claims 11, 14, and 17. Thus, the prior art does not show, teach or suggest the invention as claimed in claims 11, 12, 14, 15, 17, and 18.

Claims 1, 3, 5, and 8 are rejected under 35 U.S.C. §103 over *Shirasawa* in view of USP 6,167,167, hereinafter *Matsugu*.

Claim 1 claims an image processor, claim 5 claims a method of image processing and claim 8 claims a computer a program. The image processor includes first and second decision controllers, and a color decision controller. The first decision controller decides whether each input color component gradation value of a target pixel exists in first ranges, the ranges being defined by a preset minimum and a preset maximum gradation value for each color component. The second decision controller decides whether differences between each color component gradation value of the target pixel and those of pixels adjacent thereto exist in a respective second range that is different from the first ranges. The second range is preset in accordance with the specified color. The color decision controller decides that the target pixel has a specified color when the first decision controller decides that each color component gradation value of the target pixel exists in the first ranges and the second decision controller decides that the differences exist in the second ranges.

As set forth above with respect to claim 11, there is no teaching of a first decision controller which decides whether each input color component gradation value of a target pixel exists in a respective first range for each of the color components, the range being defined by a minimum and a maximum gradation value

for each color component in *Shirasawa*. Accordingly, the system of claim 1 obtains more accurate results than simply determining if the density levels of all the color components r, g and b for each pixel are equal to or less than a threshold th1 is taught by *Shirasawa*.

Claims 5 and 8 are similar to claim 1, and claim 3 depends from claim 1. Accordingly, they are thus also patentable at least for the reasons set forth above.

Matsugu does not overcome the deficiencies of *Shirasawa* noted above.

Claims 2, 6, 9, and 20 – 25 rejected under 35 U.S.C. §103 over *Shirasawa* and other secondary references. They are dependent claims and are patentable at least for the reasons set forth above with respect to the claims from which they depend.

New claim 26 recites an image processor wherein the second range is preset in advance in accordance with the specified color so that maximum values dRmax, dGmax and dBmax, and minimum values dRmin, dGmin and dBmax of differences dR, dG and dB of R, G and B data of adjacent pixels have been determined beforehand and the second decision means decides that the target pixel is a detection color candidate when: $dRmin \leq dR \leq dRmax$; $dGmin \leq dG \leq dGmax$; and $dBmin \leq dB \leq dBmax$.

New claim 27 recites an image processor wherein the second range is preset in advance in accordance with the specified color so that as to the input image data of an i-th pixel having color component gradation values Ri, Gi, Bi, the specified color having color component gradation values R, G, B, and Gmin, Gmax, Bmin and Bmax being determined beforehand the second decision means decides that the target

pixel is a detection confirm candidate when R-Gmin $\leq$ Ri-Gi $\leq$ R-Gmax; G-Bmin $\leq$ Gi-Bi $\leq$ G-B max; and R-B min $\leq$ Ri-B0 $\leq$ R-Bmax.

The features of new claims 26 and 27 are not disclosed in *Shirasawa*, either alone or in combination with *Matsugu*.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to Deposit Account No. 02-4800.
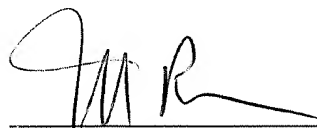
In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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